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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/883,654	06/18/2001	Catherine A. Getz	DON03 P-907	1822 12
28101	7590	10/03/2003	EXAMINER	
VAN DYKE, GARDNER, LINN AND BURKHART, LLP 2851 CHARLEVOIX DRIVE, S.E. P.O. BOX 888695 GRAND RAPIDS, MI 49588-8695			PIZIALI, ANDREW T	
			ART UNIT	PAPER NUMBER
			1775	

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/883,654

Applicant(s)

GETZ, CATHERINE A.

Examiner

Andrew T Piziali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,8-10,15,17,18,25,53 and 54 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

- 5) ☐ Claim(s) _____ is/are allowed.

- 6) ☒ Claim(s) 1-3,8-10,15,17,18,25,53 and 54 is/are rejected.

- 7) ☐ Claim(s) _____ is/are objected to.

- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 8-10, 17-18 and 53-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,590,622 to Nakanishi et al. (hereinafter referred to as Nakanishi) in view of USPN 4,802,737 to Denton.

Regarding claims 1-3, 8-10, 17-18 and 53-54, Nakanishi discloses a touch panel comprising a transparent substrate (17), an upper antireflection film (24) on the upper surface of the substrate, a lower antireflection film (25) on the lower surface of the substrate, and a transparent conductive thin film (18) on the surface of the lower antireflection film (see entire document including Figure 4). Nakanishi discloses that the transparent conductive thin film material may be ITO, tin oxide, zinc oxide, or any other suitable electrode material (column 5, lines 46-50).

Nakanishi discloses that the antireflection film may comprise alternating layers of titanium oxide and silicon oxide, but does not limit the antireflective film material (column 3, lines 9-32). Denton discloses an antireflection coating that is to be applied to both sides of a glass or plastic substrate comprising a first layer combination of silicon dioxide and titanium dioxide, a second layer of titanium dioxide and a third layer of silicon dioxide (see entire

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document including column 3, line 51 through column 4, line 26 and Figure 2). Denton discloses that the coating provides virtually no image reflection (column 2, lines 10-15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the antireflective coating disclosed by Denton, as the upper and lower antireflective films of Nakanishi, because the antireflective coating of Denton is designed to be used on each side of a transparent substrate and because the coating eliminates image reflection.

Denton discloses that the antireflection coating thickness configuration may be $\frac{1}{4}$ wavelength for the first layer, $\frac{1}{2}$ wavelength for the second layer, and $\frac{1}{4}$ wavelength for the third layer, but does not limit the antireflection coating to these thicknesses (column 4, lines 19-26 and column 1, lines 51-65). Although Denton does not specifically disclose the use of different corresponding layer thicknesses as claimed by the applicant, absent a showing of unexpected results it would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the thicknesses of the layers, because it is understood by one of ordinary skill in the art that the layer thicknesses determine properties such as transmittance, reflectance, and color and because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. The examiner takes Official Notice that it is known to one of ordinary skill in the art that the layer thicknesses of a transparent coated glass article determine properties such as transmittance, reflectance, and color.

Regarding claims 2-3, Nakanishi disclose that the substrate may be a plastic (column 4, lines 47-53), but also discloses that a typical touch panel is made out of glass because glass has a high light transmittance (column 1, line 17 through column 2, line 15). It would have been

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obvious to one having ordinary skill in the art at the time the invention was made to make the substrate out of glass because the touch panel would have a high light transmittance.

3. Claims 15 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi in view of Denton as applied to claims 1-3, 8-10, 17-18 and 53-54 above, and further in view of USPN 6,480,250 to Matsufuji et al. (hereinafter referred to as Matsufuji).

Nakanishi does not mention depositing a transparent conductive thin film on the surface of the upper antireflection film (24), but Matsufuji discloses that a transparent conductive thin film may be deposited on the upper surface of display panel for static prevention and electromagnetic wave shielding (column 1, lines 27-37). It would have been obvious to one having ordinary skill in the art at the time the invention was made to deposit a transparent conductive thin film on the surface of the upper antireflection film (24) of Nakanishi, because the transparent conductive thin film would prevent static and shield electromagnetic radiation.

4. Claims 1-3, 8-10, 17-18 and 53-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,805,330 to Byker et al. (hereinafter referred to as Byker) in view of USPN 4,802,737 to Denton.

Regarding claims 1-3, 8-10, 17-18 and 53-54, Byker discloses a glass article comprising a transparent substrate (12), an antireflection film (not shown, see column 5, lines 61-67) on the lower surface of the substrate, and a transparent conductive thin film (16) on the surface of the antireflection film (see entire document including Figure 2). Nakanishi discloses that the transparent conductive thin film material may be ITO, doped tin oxide, or any other suitable electrode material (column 5, lines 20-67).

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Byker does not disclose the specific antireflective material, but Denton discloses an antireflection coating that is to be applied to both sides of a glass or plastic substrate comprising a first layer combination of silicon dioxide and titanium dioxide, a second layer of titanium dioxide and a third layer of silicon dioxide (see entire document including column 3, line 51 through column 4, line 26 and Figure 2). Denton discloses that the coating provides virtually no image reflection (column 2, lines 10-15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the antireflective coating disclosed by Denton, on the upper and lower substrate surfaces of Byker, as disclosed by Denton, because the antireflective coating of Denton is designed to be used on each side of a transparent substrate and because the coating eliminates image reflection.

Denton discloses that the antireflection coating thickness configuration may be $\frac{1}{4}$ wavelength for the first layer, $\frac{1}{2}$ wavelength for the second layer, and $\frac{1}{4}$ wavelength for the third layer, but does not limit the antireflection coating to these thicknesses (column 4, lines 19-26 and column 1, lines 51-65). Although Denton does not specifically disclose the use of different corresponding layer thicknesses as claimed by the applicant, absent a showing of unexpected results it would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the thicknesses of the layers, because it is understood by one of ordinary skill in the art that the layer thicknesses determine properties such as transmittance, reflectance, and color and because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Regarding claims 2-3, Byker discloses that the substrate may be glass (column 3, line 61 through column 4, line 28).

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5. Claims 15 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Byker in view of Denton as applied to claims 1-3, 8-10, 17-18 and 53-54 above, and further in view of USPN 6,480,250 to Matsufuji et al. (hereinafter referred to as Matsufuji).

Byker does not mention depositing a transparent conductive thin film on the upper surface of the substrate (12), but Matsufuji discloses that a transparent conductive thin film may be deposited on the upper surface of coated glass article for static prevention and electromagnetic wave shielding (column 1, lines 27-37). It would have been obvious to one having ordinary skill in the art at the time the invention was made to deposit a transparent conductive thin film on the surface of the upper substrate (12) of Byker, because the transparent conductive thin film would prevent static and shield electromagnetic radiation.

Response to Arguments

6. Applicant's arguments have been considered but are moot in view of the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Piziali whose telephone number is (703) 306-0145. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (703) 308-3822. The fax phone numbers for the

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organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5665.

g-12

atp
September 15, 2003

Andrew T Piziali
Examiner
Art Unit 1775


DEBORAH JONES
SUPERVISORY PATENT EXAMINER